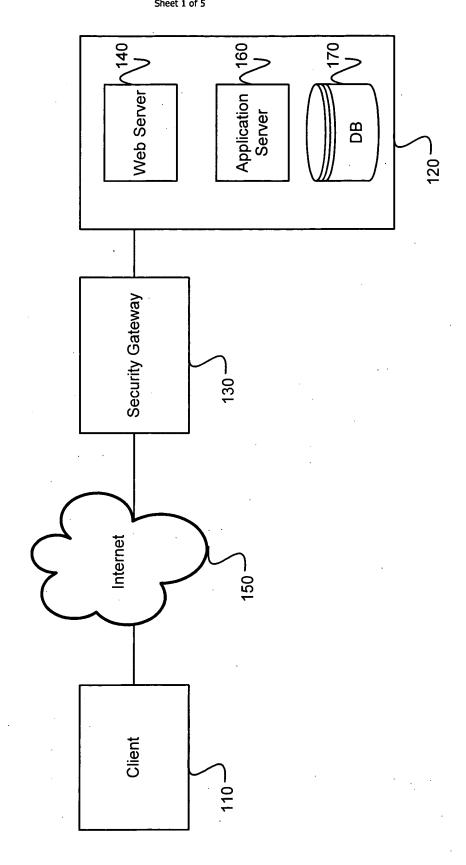Express Mail No. EV 342133346 US
Title: Using Statistical Analysis to
          Generate Exception Rules that Allow
          Legitimate Messages to Pass Through
          Application Proxies and Gateways
Inventors: Abhishek Chauhan *et al*
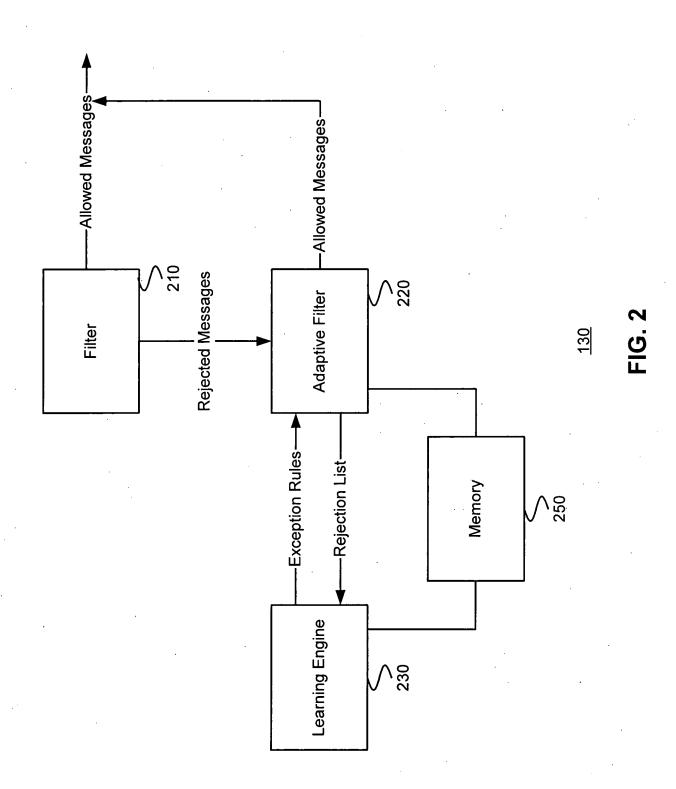Atty. Docket No.: 22271-08770
Sheet 1 of 5

FIG. 1

Express Mail No. EV 342133346 US
Title: USING STATISTICAL ANALYSIS TO
GENERATE EXCEPTION RULES THAT ALLOW
LEGITIMATE MESSAGES TO PASS THROUGH
APPLICATION PROXIES AND GATEWAYS
Inventors: Abhishek Chauhan *et al*
Atty. Docket No.: 22271-08770
Sheet 2 of 5

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FIG. 2

Express Mail No. EV 342133346 US
Title: USING STATISTICAL ANALYSIS TO
GENERATE EXCEPTION RULES THAT ALLOW
LEGITIMATE MESSAGES TO PASS THROUGH
APPLICATION PROXIES AND GATEWAYS
Inventors: Abhishek Chauhan et al
Atty. Docket No.: 22271-08770
Sheet 3 of 5

Filter messages
based on rules 305

Receive rejected messages,
rules and attributes 310

Increment frequency count for
an attribute 320

Compare counts to Thresholds 325

Generate exception rules for
high frequency attributes 330

Allow rejected message to pass
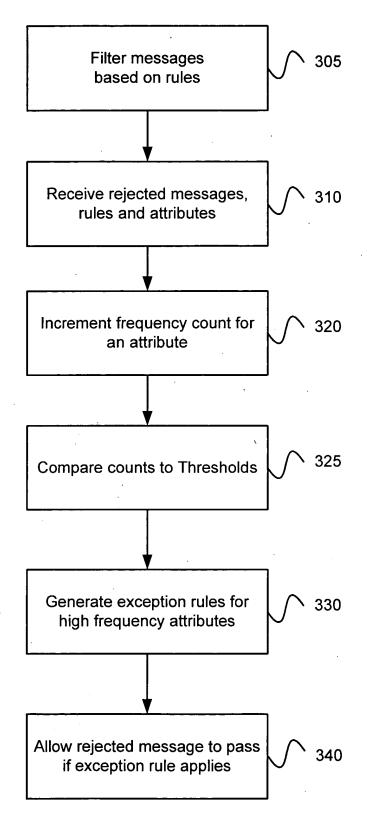if exception rule applies 340

FIG. 3

Express Mail No. EV 342133346 US
Title: USING STATISTICAL ANALYSIS TO
GENERATE EXCEPTION RULES THAT ALLOW
LEGITIMATE MESSAGES TO PASS THROUGH
APPLICATION PROXIES AND GATEWAYS
Inventors: Abhishek Chauhan *et al*
Atty. Docket No.: 22271-08770
Sheet 4 of 5
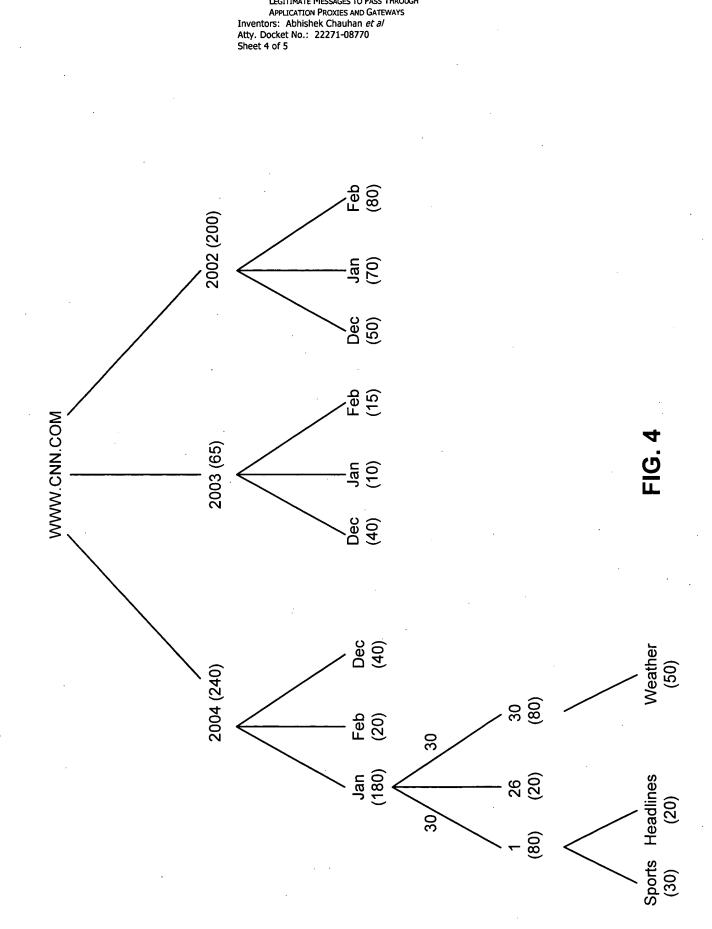
FIG. 4

Express Mail No. EV 342133346 US
Title: Using Statistical Analysis to
        Generate Exception Rules that Allow
        Legitimate Messages to Pass Through
        Application Proxies and Gateways
Inventors: Abhishek Chauhan *et al*
Atty. Docket No.: 22271-08770
Sheet 5 of 5

Traverse a trie structure to identify nodes for a cut — 510

Create the cut — 520

Generate exception rules for a node in the cut — 530

FIG. 5